EDOS Developments and Future Plans 2006-2007

Carlos Gomez
EDOS Manager

August 29, 2006

EDOS Developments 2006

- **Connectivity from Ground Stations:**

  March 2006:

  - **All EDOS GSIFs at the ground stations are now connected to the LZPF (GSFC) via a high-rate IP network line.**
  - **EDOS operations software was made fully compliant with the high-rate IP data transfers.**

- **Short-term Data Storage:**
  - **Raw data captures are now stored on hard drives using Storage Area Network (SAN) technology at each ground station.**
  - **Discontinued the usage of AMPEX tapes for the required temporary storage of raw data captures on non-volatile media.**
  - **Elimination of tapes allows automation of data reprocessing.**

EDOS Developments:
EDOS Data-Driven Phase I
June, 2006

- **The EDOS Data-Driven enhancement was placed into Operations in June 2006.**
- **Data-Driven features:**
  - **The EDOS hardware performing the data capture at each ground station was reconfigured via hardware and software to operate without the need of a pre-pass schedule**
    - » **Now driven by presence of data, not by a schedule.**
  - **Each capture system is dedicated to each antenna and it is actively monitoring incoming signals until if finds a signal that matches any of the defined supported spacecrafts.**
  - **Advantages:**
    - » **continuous capture even on last minute antenna schedule changes,**
    - » **avoidance of any pre-pass configuration issues,**
    - » **lower operations costs,**
    - » **automated capture reconciliation.**

EDOS Data-Driven Poster

EDOS Data-Drive Part II

- **Spring 2007**
  - **Final phase of EDOS re-engineering**
  - **Consolidation of operating systems into a single one**
  - **Consolidation of hardware to fewer upgraded platforms**
  - **Integration of all EDOS monitoring and control functions into a single set of screens accessible through a web browser.**
  - **Additional capability of producing rate-buffered data files at the ground stations.**
  - **Advantages:**
    - » **simpler operations of the EDOS system,**
    - » **fewer pieces of hardware to maintain and smaller floor space requirements,**
    - » **with a single operating system: better knowledge of a single system, quicker response to security issues**
    - » **reduced operating costs.**